

REMARKS

Claims 1, 2, and 4-29 are pending, with claims 1, 8, 13, 18, and 23 being independent. No new matter has been added. Reconsideration and allowance of the above-referenced application are respectfully requested.

Rejections Under 35 U.S.C. §102

Claims 1, 2, 5, 6, 8, 9, 11, 13-15, 23, and 25-27 stand rejected under 35 U.S.C. §102(e) as allegedly being anticipated by Backmutsky et al., U.S. Patent No. 6,633,548 (hereinafter 'Backmutsky'). This contention is respectfully traversed.

Independent claim 1 recites in part (underlining added for emphasis) "a network interface configurable to receive data packets; a processor coupled with the network interface; and a memory coupled with the processor, the memory being configured to instruct the processor to load a routing data structure configured to store information indicating a received data packet is to be dropped if the received data packet includes a predetermined non-forwarding destination address comprising a destination address that is invalid for packets traveling between networks."

The Office asserts that claim 1 reads on fig. 4 and the associated teachings of Backmutsky including "An invalid destination address would only get a match for route 435 and would be discarded" (Col. 4 lines 57-59). Applicants disagree. Backmutsky teaches, "When there is no mask that matches the destination address 315, the packet should not have arrived at this router and it is discarded" (Col. 3 lines 56-58). Because route 435 of Backmutsky is the only discard entry, this necessarily means that route 435 is only reached when there is no other route entry

that matches the destination address. Furthermore, because the mask length of route 435 is 0 (as shown in Fig. 4 of Backmutsky), any destination address (either valid or invalid) would match route 435. In other words, if Backmutsky's route 435 was placed first in the search, all packets would necessarily be discarded. Backmutsky's route 435 is not a specific entry referring to any particular destination address and route 435, by itself, cannot refer to a predetermined non-forwarding destination address comprising a destination address that is invalid for packets traveling between networks. Thus, Backmutsky does not teach information indicating a received data packet is to be dropped if the received data packet includes a predetermined non-forwarding destination address comprising a destination address that is invalid for packets traveling between networks. For at least this reason, claim 1 should be allowable over Backmutsky.

Independent claim 8 recites in part (underlining added for emphasis) "A method of configuring a data routing device comprising storing information in a routing data structure, wherein the information indicates that a packet having a predetermined non-forwarding destination address is to be dropped, the predetermined non-forwarding destination address comprising a destination address that is invalid for packets traveling between networks." As previously noted, Backmutsky does not teach that the information indicates that a packet having a predetermined non-forwarding destination address is to be dropped, the predetermined non-forwarding destination address comprising a destination address that is invalid for packets traveling between networks. For at least this reason, claim 8 should be allowable over Backmutsky.

Independent claim 13 recites in part (underlining added for emphasis) “comparing a destination address of a packet with routing information stored in a routing data structure, the routing information indicating that the packet either is to be routed or dropped; and selectively routing the packet based on the routing information stored in the routing data structure, said selectively routing including dropping the packet if the destination address comprises a predetermined non-forwarding address comprising a destination address that is invalid for packets traveling between networks.” For the reasons addressed above, Backmutsky does not teach selectively routing including dropping the packet if the destination address comprises a predetermined non-forwarding address comprising a destination address that is invalid for packets traveling between networks. For at least this reason, claim 13 should be allowable over Backmutsky.

Independent claim 23 recites (underlining added for emphasis) “A machine-readable medium having embodied therein machine-readable instructions for causing a machine to perform operations comprising loading one or more routing tables with destination addresses and information selectively indicating either a next-hop address for a packet or that the packet is to be dropped, wherein at least one of the destination addresses comprises a predetermined non-forwarding address for which the information indicates the packet is to be dropped, the predetermined non-forwarding destination address comprising a destination address that is invalid for packets traveling between networks.” As previously noted, Backmutsky does not teach at least one of the destination addresses comprises a predetermined non-forwarding address for which the information indicates the packet is to be dropped, the predetermined non-

forwarding destination address comprising a destination address that is invalid for packets traveling between networks. For at least this reason, claim 23 should be allowable over Backmutsky.

Dependent claims 2, 5, 6, 9, 11, 14, 15, and 25-27 should be allowable over Backmutsky for the same reasons as their respective base claims and for the additional recitations they contain.

Rejections Under 35 U.S.C. §103

Claims 4, 10, and 24 stand rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Backmutsky in view of Sawada et al., U.S. Publication No. 2002/0016858 (hereinafter 'Sawada'). This contention is respectfully traversed.

Independent claim 1 recites in part (underlining added for emphasis) "a network interface configurable to receive data packets; a processor coupled with the network interface; and a memory coupled with the processor, the memory being configured to instruct the processor to load a routing data structure configured to store information indicating a received data packet is to be dropped if the received data packet includes a predetermined non-forwarding destination address comprising a destination address that is invalid for packets traveling between networks." Neither Backmutsky, as previously noted, nor Sawada, as previously noted on pages 11-16 in the Response to Action of March 22, 2007 filed on June 21, 2007, teach information indicating a received data packet is to be dropped if the received data packet includes a predetermined non-forwarding destination address comprising a destination address that is invalid for packets

traveling between networks. Thus, Sawada does not cure the deficiencies of Backmutsky. For at least this reason, claim 1 should be allowable over Backmutsky in view of Sawada.

Independent claim 8 recites in part (underlining added for emphasis) "A method of configuring a data routing device comprising storing information in a routing data structure, wherein the information indicates that a packet having a predetermined non-forwarding destination address is to be dropped, the predetermined non-forwarding destination address comprising a destination address that is invalid for packets traveling between networks." As previously noted, neither Backmutsky nor Sawada teach that the information indicates that a packet having a predetermined non-forwarding destination address is to be dropped, the predetermined non-forwarding destination address comprising a destination address that is invalid for packets traveling between networks. Thus, Sawada does not cure the deficiencies of Backmutsky. For at least this reason, claim 8 should be allowable over Backmutsky in view of Sawada.

Independent claim 23 recites (underlining added for emphasis) "A machine-readable medium having embodied therein machine-readable instructions for causing a machine to perform operations comprising loading one or more routing tables with destination addresses and information selectively indicating either a next-hop address for a packet or that the packet is to be dropped, wherein at least one of the destination addresses comprises a predetermined non-forwarding address for which the information indicates the packet is to be dropped, the predetermined non-forwarding destination address comprising a destination address that is invalid for packets traveling between networks." As previously noted, neither Backmutsky nor

Sawada teach at least one of the destination addresses comprises a predetermined non-forwarding address for which the information indicates the packet is to be dropped, the predetermined non-forwarding destination address comprising a destination address that is invalid for packets traveling between networks. For at least this reason, claim 23 should be allowable over Backmutsky in view of Sawada.

Dependent claims 4, 10, and 24 should be allowable over Backmutsky in view of Sawada for the same reasons as their respective base claims and for the additional recitations they contain.

For example, claim 4 recites “The apparatus of claim 2, wherein the information indicating that the received data packet is to be dropped comprises a pointer to a route entry containing a drop flag.” The Office asserts “Bachmutsky et al. does not explicitly teach whether the routing table (FIG. 4) has a one bit of discard flag for a packet having the invalid destination address. Sawada et al teaches a routing table having a discard flag and an associated flag (pointer) for a packet with a destination address to be dropped. Therefore, it would have been obvious to one having ordinary skill in the art to incorporate a one-bit discard flag into the routing table of Bachmutsky et al to drop the packets.” Applicants disagree that a flag is a pointer because a flag cannot point to, i.e, reference, a memory location. Sawada discloses a flag and not a pointer to discard packets ({0116}). Thus, neither Backmutsky, as asserted by the Office, nor Sawada disclose a pointer to a route entry containing a drop flag. For at least this additional reason, claim 4 should be allowable over Backmutsky in view of Sawada.

Dependent claim 10 should be allowable over Backmutsky in view of Sawada for similar reasons.

Claims 7, 12, 16-22, 28, and 29 stand rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over Backmutsky. This contention is respectfully traversed.

Independent claim 18 recites (underlining for emphasis) "A packet routing system comprising: memory means for storing a data structure comprising a destination address routing table having entries, wherein at least one entry contains an indication that a packet having a predetermined non-forwarding destination address that resolves to the least one entry is to be dropped, the predetermined non-forwarding destination address comprising a destination address that is invalid for packets traveling between networks; and processing means for receiving a packet having a destination address from a first network, for checking the destination address against the destination address routing table, and for transmitting the received packet to a second network only if the received packet does not resolve to the at least one entry." As previously noted, Backmutsky does not teach at least one entry contains an indication that a packet having a predetermined non-forwarding destination address that resolves to the least one entry is to be dropped, the predetermined non-forwarding destination address comprising a destination address that is invalid for packets traveling between networks. For at least this reason, claim 18 should be allowable over Backmutsky.

Dependent claims 7, 12, 16, 17, 19-22, 28, and 29 should be allowable over Backmutsky because their respective base claims should be allowable over Backmutsky, for the reasons detailed above, and for the additional recitations they contain.

For example, dependent claim 7 recites in part “the data packet is an Internet Protocol packet and the stored information comprises a deprecated directed broadcast address.” As previously noted, Backmutsky teaches a single entry (route 435) for the dropping of packets and any address can “match” this route because the mask length of route 435 is zero. Furthermore, Fig. 4 of Backmutsky shows that route 435 has an address of “0” which cannot be a deprecated directed broadcast address. Thus, Backmutsky does not teach that the stored information comprises a deprecated directed broadcast address. For at least this additional reason, claim 7 should be allowable over Backmutsky.

The Office asserts “Regarding claims 7, 12, and 16, Bachmutsky et al does not explicitly teach that the routing table (FIG. 4) comprises a deprecated directed broadcast address. It would have been obvious to one having ordinary skill in the art to enter any kind of address into the routing table for the processor to implement for filtering destination addresses matching entries in the table.” Applicants disagree. A person having ordinary skill in the art would not enter any kind of address into the routing table. If this person entered in a deprecated directed broadcast address into Backmutsky’s routing table before route 435, Backmutsky’s router would assume that any packet whose destination address matches this deprecated directed broadcast address should be forwarded and not dropped. Therefore, the desired outcome of dropping such packet is not achieved. Moreover, with respect to route 435, since the mask length of route 435 is 0, no address need be entered at all in route 435 for packets reaching this entry to be dropped. Thus, the suggestion that one would add some specific address to this entry defies common sense. Therefore, a person having ordinary skill in the art would not enter a deprecated directed

broadcast address into the routing table of Backmutsky. For at least this additional reason, claim 7 should be allowable over Backmutsky.

Dependent claims 12 and 16 should also be allowable over Backmutsky for similar reasons.

Concluding Remarks

It is believed that all of the pending claims have been addressed. However, the absence of a reply to a specific issue or comment does not signify agreement with or concession of that issue or comment. Because the arguments made above may not be exhaustive, there may be reasons for patentability of any or all pending claims (or other claims) that have not been expressed. Finally, nothing in this paper should be construed as an intent to concede any issue with regard to any claim, except as specifically stated in this paper, and the amendment of any claim does not necessarily signify concession of unpatentability of the claim prior to its amendment.

It is respectfully suggested for all of these reasons, that the current rejections are overcome, that none of the cited art teaches or suggests the features which are claimed, and therefore that all of these claims should be in condition for allowance. A formal notice of allowance is thus respectfully requested.

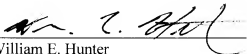
Applicant : Aaron R. Kunze et al.
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Page : 18 of 18

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Please apply the Petition for Extension of Time fee for one month, and any other necessary charges or credits, to deposit account 06-1050.

Respectfully submitted,

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